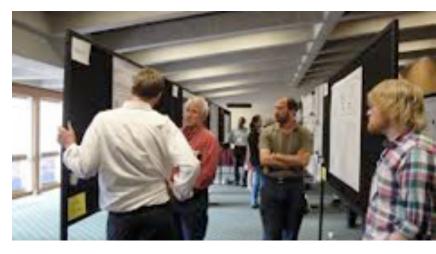


Poster Sessions at Major Conferences

- Sessions for attendees to mingle in an around posters and presenters
- Posters usually viewable any time the conference is in session
- Often there is a poster session or reception
- Often 100s of posters are presented







Presentations vs. Papers

Papers

- Single preplanned narrative
- Write/Read
- Remote audience
- Reader can take their time
- Multiple pages
- Arms-length interaction

Presentations

- Preplanned narrative
- Speak/Listen
- Captive audience
- Time-slot of 15-60 minutes
- Multiple slides
- Increased chance of interaction



Presentations vs. Papers vs. Posters

Papers

- Single preplanned narrative
- Write/Read
- Remote audience
- Reader can take their time
- Multiple pages
- Limited interaction

Presentations

- Preplanned narrative
- Speak/Listen
- Captive audience
- 15-60 minutes
- Multiple slides
- Increased chance of interaction

Posters

- Multiple narratives
- Discussion
- Browsing audience
- ~5 minutes per discussion
- Single page/slide
- Interactive
- Often posters can be viewed outside of session



Understanding Your Your Audience

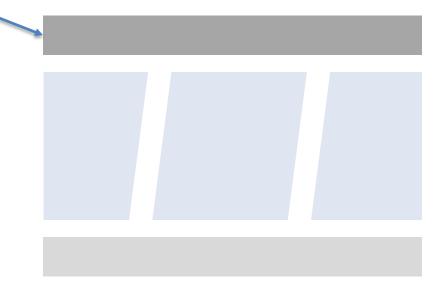
- People in your field of specialization
 - Can get to specifics
- People in closely-related field of specialization
 - Need context, may be unfamiliar with your jargon
- People in unrelated fields
 - Need to explain the problem and the solution. Will not understand your jargon



Basic Poster Content – Header

Title

- Briefly convey the subject matter, orient the viewer
- Attract interest without gimmicks
- Author(s)
 - Contact Information





Basic Poster Content – Main Section Alternate #1

Introduction

 Problem Statement (why it matters), avoiding as much jargon as possible

Methodology

Not too much detail, graphics work well in many cases

Results

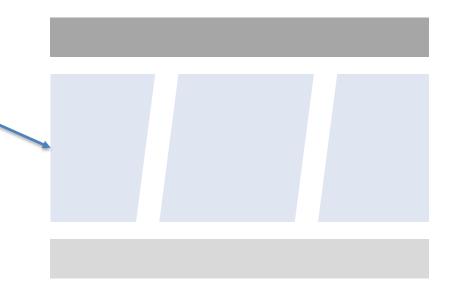
- What worked, what didn't
- Brief data analysis

Conclusions

- Your interpretations (Don't repeat results)
- Further work

Extras

- QR Code: Pointer to online resources
- Flip or slide panels
- Video





Basic Poster Content – Main Section Alternate #2

Introduction

 Problem Statement (why it matters), avoiding as much jargon as possible

System Design & Features

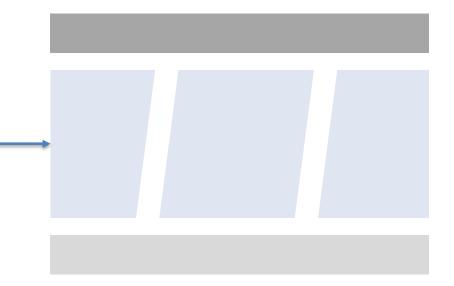
Not too much detail, graphics work well in many cases

Future Enhancements

Further work

Extras

- QR Code: Pointer to online resources
- Flip or slide panels
- Video





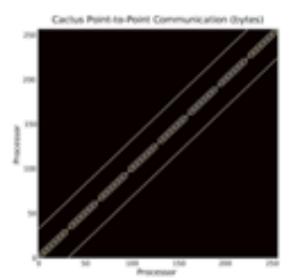
Basic Poster Content – Footer

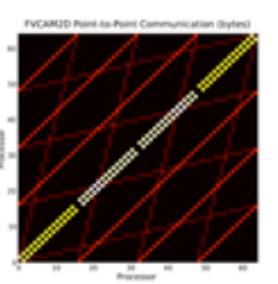
- Citations
- Acknowledgements/ Logos / Institutional Verbiage
- Further Information

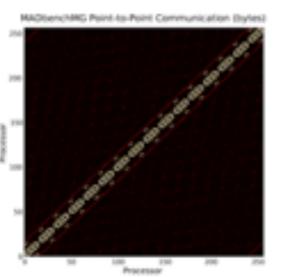


Use Visual Communication

- Graphics to help you talk to your work
- Label graphs and charts legibly, and clearly enough that the label stands on its own
- Use different portions of poster to engage at different level of abstraction and separate logical concepts



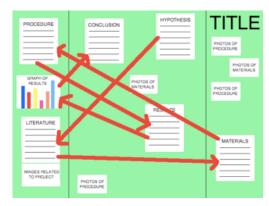






Things to Avoid (1)

- Avoid over-crowded or busy layouts
 - Flow is often confusing, or the eye doesn't know where to look



http://sciencefair.math.iit.edu/display/layoutflow/

- Avoid garish color schemes or awkward font choices
 - Dark backgrounds can print poorly



http://bonfx.com/bad-typography/



Things to Avoid (2)

1,958 words (28pt Times New Roman) can be crammed onto a 56 x 35" poster that has space between elements but only annoying logos for visual relief

Colin Purrington

666 Teipai Street, Posterville, PA 19801, USA

Introduction

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Materials and methods

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Litterature cited

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Introduction

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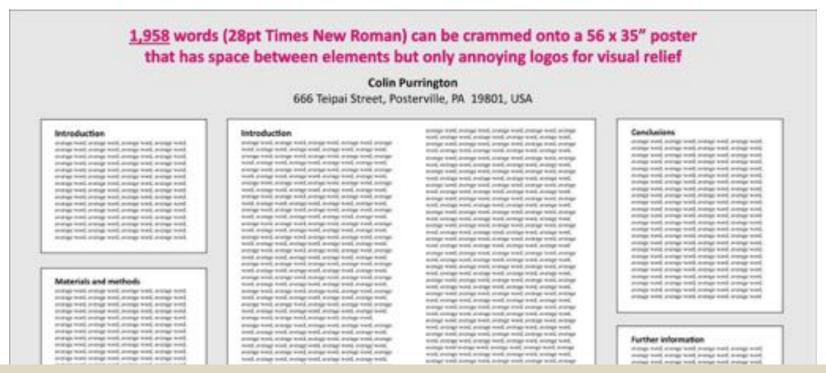
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Further information





Things to Avoid (2)



- Avoid writing an article pretending to be a poster
 - Aim for 500-700 words
- Avoid large blocks of condensed text
 - Use appropriate white space
 - Consider using lists

Things to Avoid (3) Bad Poster Bingo by Zen Faulkes

Different parts of poster don't line up	Boxes within boxes	Zigzag reading order	More than three typefaces	Long-winded title
Gradient fills in coloured boxes	Big blocks of text	Photographic background	Unlabelled error bars on graphs	Pixelated pictures
More than five colours	Institutional logos bookending title	Free space	ALL CAPITALS	Text with shadows, or bevels
Abstract	Underlined text	Comic Sans	3-D graphs	Checking tablet or phone during presentation
Tables showing data that could be in a graph	Poster does not fit on poster board	Comic Sans (it's that annoying)	Objects almost touching or overlapping	Tiny, unreadable type

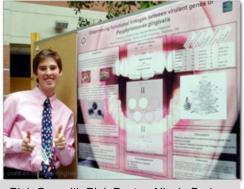
Marketing Your Poster

- Make your poster compelling so it will stand out
- Look like you want people to stop and talk
- Don't stand in front of your poster
- Make room for multiple visitors
- Talk to your visitors as opposed to your poster
- Think of various short pitches that you could employ
- Handouts, business cards

Can be taken to excess:

Keegan, D.A., and S.L. Bannister. Effect of color coordination of attire with poster presentation on poster popularity. *Canadian Medical Association Journal* 169:1291-1292 (2003)

http://betterposters.blogspot.com/2012/03/colour-clash.html



Pink Guy with Pink Poster. Nicole Barker.



1-Minute Pitch and/or Video Introduction

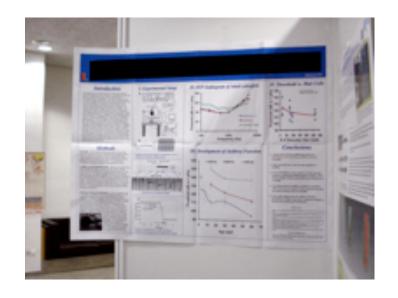
- Many poster programs feature a set of 1-minute pitches where all poster authors can explain why someone should visit their poster
 - You need a hook to stand out
 - Pose a puzzle
- Recent virtual poster sessions often have online posters accompanied with short introduction videos by authors
 - Record one of your pitches and use a visual on the poster



Follow Poster Session Instructions

Note format and size requirements

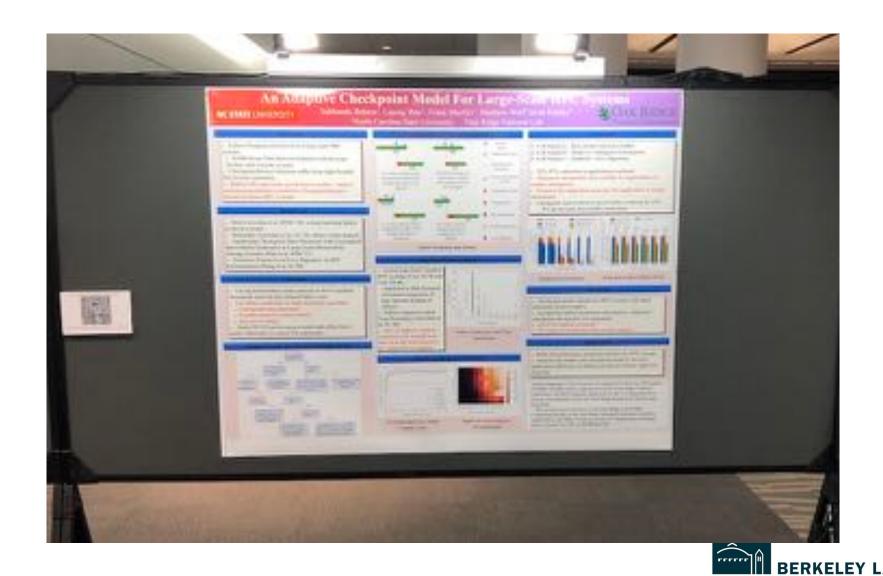


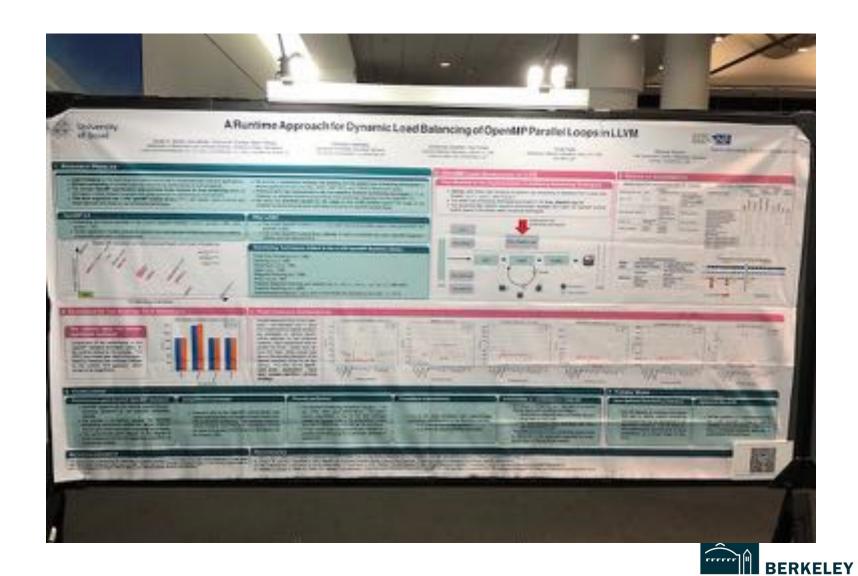


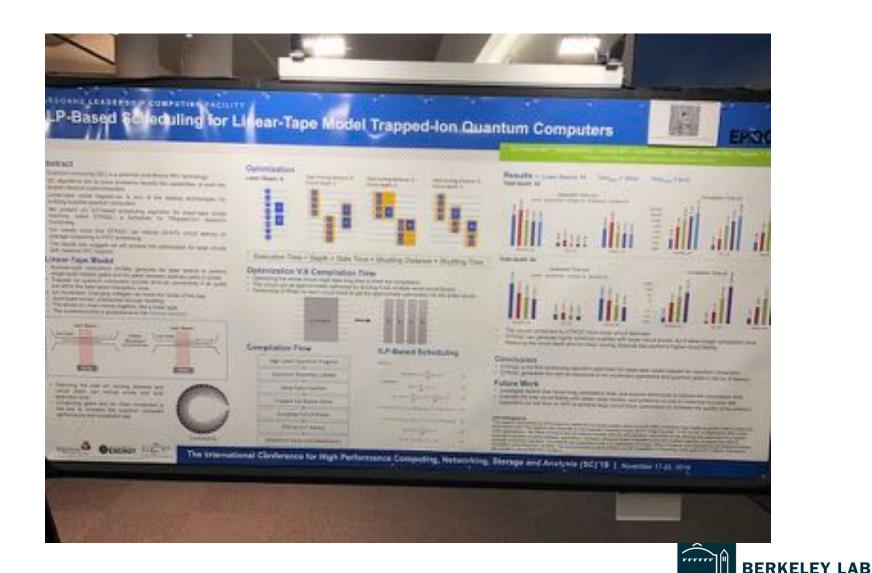
 Put up and take down your poster in a timely manner











Resources

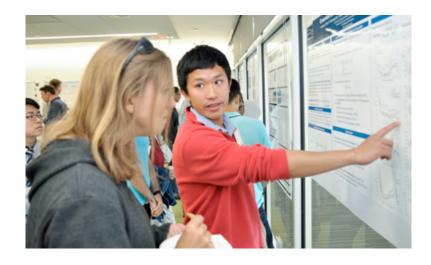
- Colin Purrington, Swarthmore College
 - http://colinpurrington.com/tips/poster-design
 - Suggestions for software, templates, and more...
- Zen Faulkes, University of Texas
 - http://betterposters.blogspot.com
 - Advice and poster critiques, up-to-date resource,...
- George Hess, Kathryn Tosney, and Leon Liegel, North Carolina State University
 - http://go.ncsu.edu/posters
 - More basic advice on formats, style, poster elements, etc.

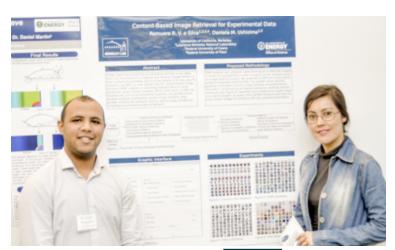


CS Summer Student Program Poster Session

- August 4th; Held via Zoom
- We expect more than 50 posters
- High visibility for lab scientists in CS and elsewhere in the lab





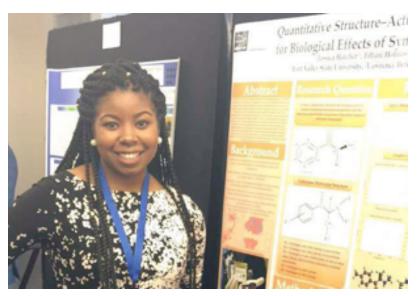


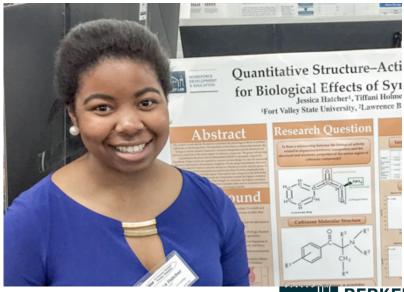


CS Summer Student Program Poster Session

A great way to practice poster design and presentation

Jessica Hatcher from Fort Valley State University in Georgia won a first-place award for her research poster "Quantitative Structure Activity Relationships (QSAR) for Biological Effects of Synthetic Cathinones" at the 74th Joint Annual Meeting of The National Institute of Science / Beta Kappa Chi National Scientific Honor Society





Examples



WHICH IS MORE IMPORTANT: NUMBER OF PATCHES OR CONNECTIVITY?

Darin Kalisak, PBS Student

Contact: dlkalisa@unity.ncsu.edu

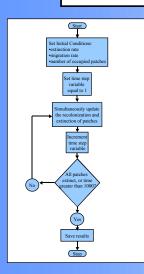
INTRODUCTION AND OBJECTIVES

Metapopulation conservation efforts with limited resources would benefit from a clear understanding of the effects of different conservation strategies, so that the conservationists can decide how to best spend their resources. In particular, in metapopulations with randomly occurring patch extinction and recolonization, it is desirable to know what conservation strategy is more effective: is it better to spend effort to add new patches to the metapopulation, or is it better to spend that effort to facilitate migration between patches?

As an aid to real-life conservation efforts, this model might be useful in weighing various strategies. For example, if the conservation choices for an endangered species are either to buy land to connect existing habitats (increasing connectivity), or to simply work to preserve multiple habitats (increasing number of patches), the model may avoid a solution which is economically preferable but ecologically ineffective.

I developed a simple metapopulation model to investigate this issue. I ran the model using varying numbers of patches, where each patch is considered to be either extinct or occupied, and where every pair of patches is either connected or disconnected for purposes of migration. The whole metapopulation is considered to be extinct if and only if all of the patches are extinct.

THE PROGRAM



ASSUMPTIONS AND LIMITATIONS

 Additional migration pathways were added in a manner which kept the number of pathways for each patch fairly constant. No effort was made to investigate the effects of less symmetric configurations.

 Starting patch habitation was randomly determined, and so the results may not correspond well to specific species metapopulations with known starting conditions.

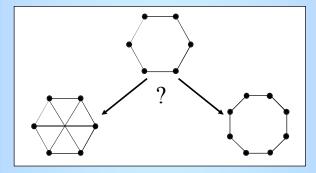
•All patches were assumed to be either fully occupied or extinct, and of equal value to the metapopulation.

 All migration pathways were equivalent, regardless of spatial distances or other factors involved.

 The model had a low resolution for differing probabilities of extinction and migration.

•The model amalgamated results from differing extinction and migration probabilities within a number of patches. It is possible that for specific parameter values, this amalgamation will hide results contrary to the overall trend reported here.

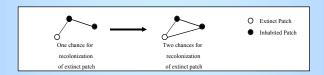
THE ISSUE



A metapopulation is a collection of discrete population patches, in which individual patches may typically go extinct and be recolonized. Is the long-term viability of the metapopulation helped more by adding new patches or by increasing the number of migration pathways between existing patches?

Adding patches increases the overall population of the organism, and makes a total extinction less likely by increasing the sheer number of patches which would have to go extinct

Adding migration pathways increases the likelihood of recolonization of extinct pathways, by giving extinct patches more sources for immigration.

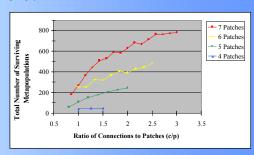


RESULTS

I tested the model by running simulations which varied over four parameters:

- number of patches (values 4, 5, 6, and 7)
- minimally connected to maximally connected (expressed as the ratio of migration pathways to number of patches, or c/p)
- time-step-extinction probabilities of .2, .4, .6, and .8
- time-step-migration probabilities of .2, .4, .6, and .8

For every combination of these parameters, Iran 100 simulations of 1000 time-steps each, and tracked the number of instances out of those 100 runs that the metapopulation did not go extinct. For each number of patches, I then summed the number of surviving metapopulations for each connection ratio to obtain a summary value for each patch/pathway configuration. The results are graphed below. The model showed that increasing the number of patches by only one patch had a far greater effect on metapopulation survival than did increasing the connectivity between patches. A horizontal line intersecting two result curves would, at each intersection, show the ratio of connectivity necessary to achieve the same survival rate for each of the two metapopulations. In every case, the metapopulation with the greater number of patches requires a lower connectivity ratio to maintain the desired survival level. In some cases, as with four patches, no increase in connectivity could have the same effect on metapopulation survival as a adding a single patch.



CONCLUSIONS

The results of this model indicate that, when possible, adding patches to a metapopulation is far preferable to incremental increases in numbers of migration pathways. There are some cases in which substantial gains in numbers of pathways can improve the long term viability of the metapopulation compared to addition of a patch. When the costs of these additional pathways is relatively low, this may be a good strategy, however in most cases the greatest benefit to the metapopulation will come from adding more natiches.

It is worth noting that in our results, the curve for each additional patch is steeper than the last. It may be that the low numbers of patches I tested are an important limit on the effects of connectivity. Simulations using larger numbers of patches may show that increased connectivity can have a greater effect on metapopulation survival than is seen here.

WHICH IS MORE IMPORTANT: NUMBER OF PATCHES OR CONNECTIVITY?

Darin Kalisak, PBS Student

Contact: dlkalisa@unity.ncsu.edu

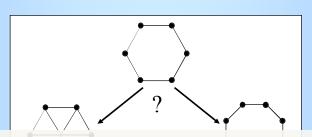
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As an aid to real-life conservation efforts, this model might be useful in weighing various strategies. For example, if the conservation choices for an endangered species are either to buy land to connect existing habitats (increasing connectivity), or to simply work to preserve multiple habitats (increasing number of patches), the model may avoid a solution which is economically preferable but ecologically ineffective.

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THE ISSUE



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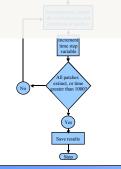
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Too many large text blocks, Some issues about flow (solution stated before problem), Poor color contrast in some sections, Some unlabeled figures, A

cut-and-paste from Excel, but

A reasonable overall balance and format, clear titles



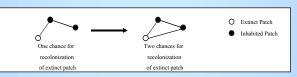
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PIGS IN SPACE: EFFECT OF ZERO GRAVITY MAD AD LIBITUM FEEDING ON WEIGHT GAIN IN CAVIA PORCELLUS



练师/A/C | D 2 | D 5

ABSTRACT:

One ignored benefit of space travel is a gotential alministron of obsets, a chromic problem for a gotenty amplority in many parts of the arms. In the pay, when an excludible is in a condition of zero grantly weight is alministed. Indeed, it lipace one could concentrativity takes at this method and never even pais at grain, and the only site effect would be the need to upgrade overly stretchy pants; weight to the found to be soften the soften and pay and the soften action of the soften and soften and the soften and the soften and the soften action of the soften and to be soften than the soften action of the soften and conditions were founded asportantly and given unitended amounts of high-colorie tool poleris. Fresh truth and vegetables were not available in apare as were, not depend only the Colories pay and weighted. After 5 years, we found that individuals, on average, weighted nothing. In addition to weight agreement of the protocol. If optice continues to be grantly-tree, and we believe that assumption is sound, we believe that sending the overweight in any though a lock for overweight in a testing turn.

Colin B. Purrington 6673 College Avenue, Swarthmore, PA 19081 USA

INTRODUCTION:

The current obesity epidetric started in the early 1900s with the invention and proliferation of electrics and religied stretchy fibers, which released wearers from the rigid constraints of clothes and permitted monthly weight gain settings the need to loay new outlist. Indeed, exercise today for hundreds of million people invente only the act of weering stretchy parts in public, presumably because the constraints pressure forces fall molecules to adopt a more compact tensory structure citaires 1900s.

Lustify, at the same time that fabrics became shelding the size to the moon between the United States and fluesia yested is useful fact, graphy in outer space is minimar to nonestate. When graphy is zero, objects cases to base seight, indeed, early astronauts and dismonauts had to secure themselves to their ships with seat before and sticky bods. The potential application to weight loss was noted immediately, but at the time travel to space was prohibitely expensive and thus the issue was not sentually pursued. Nice, however, multiple companies are developing these extra-obtait travel options for normal consumers, and potential travelers are also creating news ways to play for products and services that they carried actually afford. Together, these factors open the possibility that moving to space could cure overweight syndrome quickly after the permanently for a large number of humans.

We studied this potential by following weight gain in Guines pigs. Amountin Earth as forid of ad Botum Sweling Guines, pigs were long entilitioned to be the "Guines pigs" of space research, too, so they seemed like the obvious choice. Studies on burnans are of course destrable, but we feel this current study will be critical in acquiring the attention of greating agencies.

MATERIALS AND METHODS

One hundred main and one hundred female (Quines pige (Garla porcellus) were transported to the International Space Laboratory in 2010. Each jug was fewered expensiony and deprived of exercise wheels and freelt byte and respective to 48 months. Each month, pige were individually swighed by ducttiquing them to an electronic believes sensitive to 5,0001 grams. Back on Each, as identical other was similarly maintained and weighed. Data was analyzed by statistics.

RESULTS:

Mean weight of pigs in space was 0,0000 or 0,0000 g. Some individuals weighted less flam Jaro, some more, but these individuals were due to neartion to the duct tape, we believe, which caused from to be attemed push briefly against the furner plate in the factorial. Individuals on the Earth, the during cohort, gained about 340 gimonth ip = 0,0000. Makes and termine gained a similar amount of seight on Earth for main of effect of sex), and size at any point during the study was related to starting size particle was used at a constant in the RNCDVID. Both Earth and space pigs developed substantial develope 100-bits often) and sever lethergic at the conclusion of the study.

. .



CONCLUSIONS:

Our event that weight and weight gain would be zero in space was confirmed. Although we have not replicated this experiment on larger arimats or primates, we are confident that our natual would be minored in other model organisms. We are currently in the process of obtaining necessary human trial permissions, and should have our planned experiment instead within 10 years, pending expedited review by local and follower.

ACKNOWLEDGEMENTS:

I am grateful for generous support from the National Research Foundation, Black Hole Det Plans, and the High Fruction Sugar Association. Transport Sights were funded by SPACE-EXES, the comportum of wives divorced from insurely wealthy space-fight starkage. I am also grateful for comments on early drafts by Martana Athletic Club. Corpus Christ, USA. Finally, senses thereis to the Cuy Foundation for generously donating animal care within the conclusion of the study.

LITERATURE CITED:

NASA, 1982. Project STS-XX: Guinea Pigs. Leoked internal memo.

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Kavler, M. 1985. Electure Purchases Accelerate Weight Dain in Core-control Study Journal of Obesity, 2:25-45.

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PIGS IN SPACE: EFFECT OF ZERO GRAVITY MIND AD LIBITUM FEEDING ON WEIGHT. GAIN IN CAVIA PORCEIVINS



STRANGER 2 4 35

ABSTRACT:

One specified benefit of space travel is a gotherical selection of obesity, a divinic problem for a growing majority in samy parts of the world. In theory, when an individual is in a condition of select grantly, weight is eliminated. Indeed, it space one could coincerwidly tribue all lottum feeling and never even gain at grain, and the only sole effect would be the need to upgrain over the selection of the contribution of the selection of the s

Colin B. Purrington 6673 College Avenue, Swarthmore, PA 19081 USA

INTRODUCTION:

The current obesity epidemic started in the early 1900s with the Invention and proliferation of electane and religible threstop tibers, which-released enserers from the rigid constraints of clothes and permitted monthly weight gain satisfued the need to loop new cutilits. Indeed, examine today for hundreds of million people involve only the act of wearing stretchy parts in public, presumably because the constrictive pressure forces fat molecules to adopt a more compact tentiary structure (Harrier 1965).

Custify, at the same time that faintis begame stretchy. The race to the moon between the United States and Museus yielded a upstul fact grayty in outer space is minimal to nonexistent. When gravity is zero, objects passe to basic weight. Indeed, early astronauts and obsimonauts had to secure themselves to their ships with sest before the passes weight.

MATERIALS AND METHODS

One hundred male and one hundred female Guinea pige (Gaula propilist) were transported to the Informational Space aboratory in 2010. Each jug was financial separately and legithed of searchie whitein and fresh butts and registalists to 8 months. Each month, pige were individually seighted by ductspring them to an electronic balance sensitive to 0.0001 grams. Back on Earth, an identical cohort was similarly maintained and resigned. Data was annihilated to statistics.

RESULTS:

een weight of pigs in space was COSSO of COSSS of Some dividuals weighed less than zero, some more, but these

- Too many large text blocks
- Text confused with background
- Randomly sized and colored boxes
- Annoying logos
- Cutesy and hard-to-read title

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Algorithmic Probes for Evaluating Computer Architectures

FUTURE TECHNOLOGIES GROUP

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Behavioral Modeling Using Apex Map

Apex-Map: Memory Access Probe

Apex-Map generates memory references as stochastic variates based on sampling the following random process:

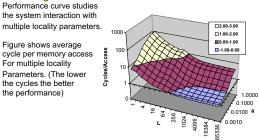
$$x_i = \frac{M}{I} r^{\frac{1}{\alpha}}$$

where α represents the temporal locality parameter of an application, Mrepresents the memory footprint of this application, and L represents the spatial locality parameter of the application.

Assessing the Performance of an Architecture

multiple locality parameters. Figure shows average cycle per memory access For multiple locality Parameters. (The lower the cycles the better the performance)

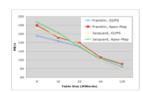
the system interaction with



Using Apex Map as an Application Proxy

Other parameters are added to the model to capture complex application, such as computational intensity, register pressure, and concurrency level.

The figures below shows the that Apex-Map can follow the behavior of CUPS application closely.

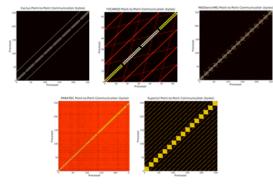


Apex-Map	Stream
Pattern	Random
Temp Locality	1
Spatial Locality	1
Reg. Pressure	1
Comp. Intensity	15
Concurrency	NUPDATE
Access Mode	NESTED

Application Characterization

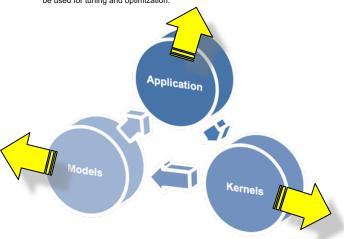
Application Communication Profiles

Characterize communication by using IPM profiling layer: run the full application unmodified and obtain the communication patterns. This shows the variety of communication signatures of DOE apps.



Extract Major Kernels

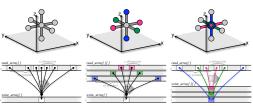
Based on communication and performance profiles, extract the major computational kernels into probes/reduced benchmarks, which can then be used for tuning and optimization.



Kernel Optimization

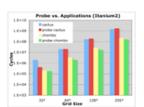
StencilProbe: Benchmark & Testbed for Stencil **Optimizations**

The StencilProbe enables optimization exploration of extracted stencil kernels, while avoiding the large overheads of running entire



Example stencils kernels and their memory access patterns

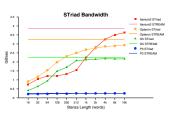
Using extracted kernels from Chombo and Cactus, two applications which heavily use stencils, data shows the StencilProbe accurately mimics application performance.



Discovering Prefetch Behavior using Stanza Triad

Based on the memory access pattern of cache-blocked stencils, the Stanza Triad is a simple version of the STREAM benchmark that uses stanzas: unit-stride triads are performed for a set number of locations before jumping in memory.

STriad results show that prefetching engines are sensitive to stanza length and memory bandwidth suffers if stanzas are (and thus stencil cache blocks) are too small.



Algorithmic Probes for Evaluating Computer Architectures

FUTURE TECHNOLOGIES GROUP

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Behavioral Modeling Using Apex Map

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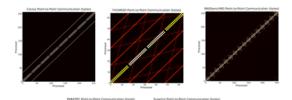
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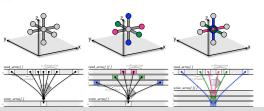
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applications which heavily us

stencils, data shows the

application performance

Assessing the Performance of an Architecture

Performance curve studies

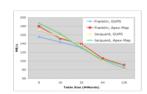
- Text font hard to read
- Good balance between text and graphics
- Good color contrast

Organization of poster reflects organization of project, but is the reading order clear?

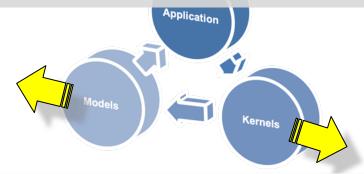
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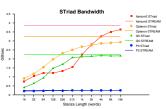
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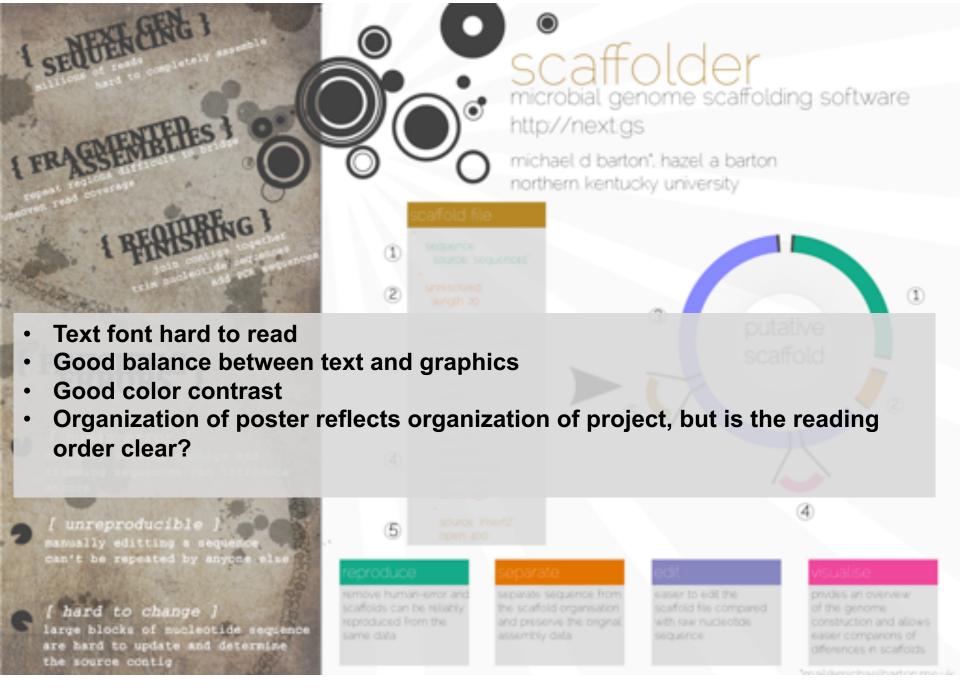
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Michael Barton http://www.bioinformaticszen.com/post/preseting-software-on-a-poster/

Attributions Link Performance to Changes in Feedback: A Policy Capturing Study

Dan M. Kela, Lauren D. Morphy. Corf. W. Ruddish

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Attributions are a causal mechanism linking performance to feedback.



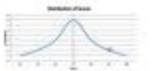


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